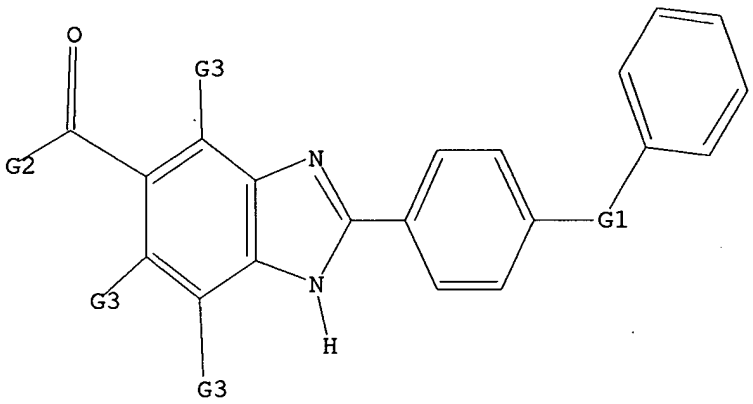
```
=> s l1
SAMPLE SEARCH INITIATED 15:15:55 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED -     1301 TO ITERATE

100.0% PROCESSED     1301 ITERATIONS                                 4 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS:        23857 TO    28183
PROJECTED ANSWERS:               4 TO      200

L2             4 SEA SSS SAM L1

=> s l1 full
FULL SEARCH INITIATED 15:16:00 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -    25546 TO ITERATE

100.0% PROCESSED    25546 ITERATIONS                                89 ANSWERS
SEARCH TIME: 00.00.02

L3            89 SEA SSS FUL L1

=> fil caplus
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                         ENTRY    SESSION
FULL ESTIMATED COST                                     161.33     161.54

FILE 'CAPLUS' ENTERED AT 15:16:05 ON 13 OCT 2005
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)


Copyright of the articles to which records in this database refer is
held by the publishers listed in the PUBLISHER (PB) field (available
for records published or updated in Chemical Abstracts after December
26, 1996), unless otherwise indicated in the original publications.
The CA Lexicon is the copyrighted intellectual property of the
American Chemical Society and is provided to assist you in searching
databases on STN.  Any dissemination, distribution, copying, or storing
of this information, without the prior written consent of CAS, is
strictly prohibited.

FILE COVERS 1907 - 13 Oct 2005  VOL 143 ISS 16
FILE LAST UPDATED: 12 Oct 2005  (20051012/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply.
They are available for your review at:

http://www.cas.org/infopolicy.html

This file contains CAS Registry Numbers for easy and accurate
substance identification.

=> s l3
L4            27 L3

=> d ed abs ibib hitstr 1-27
```



G1 CF2,SO2,Ak

G2 OH,NH2

G3 H,Me,X

Structure attributes must be viewed using STN Express query preparation.

```
=> s l10
SAMPLE SEARCH INITIATED 13:25:53 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED -      704 TO ITERATE

100.0% PROCESSED      704 ITERATIONS                                2 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS:        12489 TO    15671
PROJECTED ANSWERS:               2 TO      124

L11           2 SEA SSS SAM L10

=> s l10 full
FULL SEARCH INITIATED 13:25:58 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -    14068 TO ITERATE

100.0% PROCESSED    14068 ITERATIONS                               54 ANSWERS
SEARCH TIME: 00.00.02

L12          54 SEA SSS FUL L10

=> fil caplus
COST IN U.S. DOLLARS                                  SINCE FILE      TOTAL
                                                         ENTRY    SESSION
FULL ESTIMATED COST                                     166.49     780.80

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)            SINCE FILE      TOTAL
                                                         ENTRY    SESSION
CA SUBSCRIBER PRICE                                       0.00     -41.61

FILE 'CAPLUS' ENTERED AT 13:26:05 ON 13 OCT 2005
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
```

FILE COVERS 1907 - 13 Oct 2005 VOL 143 ISS 16
FILE LAST UPDATED: 12 Oct 2005 (20051012/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

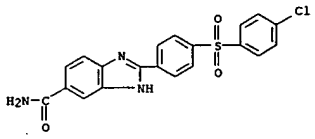
http://www.cas.org/infopolicy.html

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l12
L13 3 L12

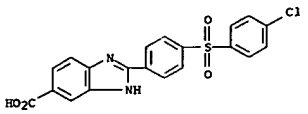
=> d ed abs ibib hitstr 1-3

L13 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN
ED Entered STN: 06 Nov 2004
AB The discovery of a series of novel, potent, and highly selective inhibitors of the DNA damage control kinase chk2 is disclosed. Here we report the first SAR study around inhibitors of this kinase. High-throughput screening of purified human chk2 led to the identification of a novel series of 2-arylbenzimidazole inhibitors of the kinase. Optimization was facilitated using homol. models of chk2 and docking of inhibitors, leading to the highly potent 2-arylbenzimidazole 2h (IC50 15 nM). Compound 2h is an ATP-competitive inhibitor of chk2 that dose dependently protects human CD4+ and CD8+ T-cells from apoptosis due to ionizing radiation. This work suggests that a selective small mol. inhibitor of chk2 could be a useful adjuvant to radiotherapy, increasing the therapeutic window of such treatment.
ACCESSION NUMBER: 2004:930363 CAPLUS
DOCUMENT NUMBER: 142:211393
TITLE: Checkpoint Kinase Inhibitors: SAR and Radioprotective Properties of a Series of 2-Arylbenzimidazoles
AUTHOR(S): Arienti, Kristen L.; Brunmark, Anders; Axe, Frank U.; McClure, Kelly; Lee, Alice; Blevitt, Jon; Neff, Danielle K.; Huang, Liming; Crawford, Shelby; Pandit, Chennagiri R.; Karlsson, Lars; Breitenbucher, J. Guy
CORPORATE SOURCE: Johnson Johnson Pharmaceutical Research and Development L.L.C., San Diego, CA, 92121, USA
SOURCE: Journal of Medicinal Chemistry (2005), 48(6), 1873-1885
CODEN: JMCMAR; ISSN: 0022-2623
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
IT **516481-60-0P**, 2-[4-(4-Chlorobenzenesulfonyl)phenyl]-1H-benzimidazole-5-carboxylic Acid Amide
RL: PAC (Pharmacological activity); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(checkpoint kinase inhibitors with SAR and radioprotective properties of a series of 2-arylbenzimidazoles)
RN 516481-60-0 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[4-[(4-chlorophenyl)sulfonyl]phenyl]- (9CI) (CA INDEX NAME)



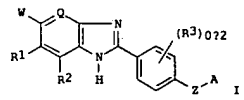
IT **516481-61-1P**
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(checkpoint kinase inhibitors with SAR and radioprotective properties of a series of 2-arylbenzimidazoles)
RN 516481-61-1 CAPLUS

L13 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
CN 1H-Benzimidazole-5-carboxylic acid, 2-[4-[(4-chlorophenyl)sulfonyl]phenyl]- (9CI) (CA INDEX NAME)

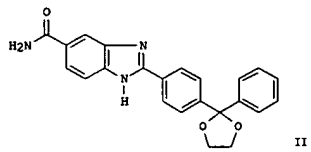


REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN
ED Entered STN: 29 Oct 2004
GI



I



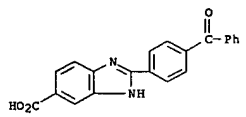
II

AB The invention relates to a preparation of benzimidazole and imidazo[4,5]pyridine derivs. of formula I [wherein: W is CO2H, C(O)NH2, or SO2NH2; Q is N or CH; R1 and R2 are independently selected from H and halogen; Z is C(O), CF2, C:CH2, or CH2, etc.; A is -SO2-piperidinyl derivative, SO2 is attached to the N of piperidinyl; R3 is absent or independently selected from OH, CF3, alkyl, or NO2, etc.], useful as inhibitors of Cds1 and useful as adjuvants to chemotherapy or radiation therapy in the treatment of cancer. For instance, benzimidazole derivative II (IC50 = 55 nM) was prepared via heterocyclization of 3,4-diaminobenzamide and 4-(2-phenyl-[1,3]dioxolan-2-yl)benzaldehyde with a yield of 63% (example 1).
ACCESSION NUMBER: 2004:905625 CAPLUS
DOCUMENT NUMBER: 141:366232
TITLE: A preparation of benzimidazole and imidazo[4,5]pyridine derivatives, useful as Cds1 inhibitors
INVENTOR(S): Amerika, Michael K.; Arienti, Kristen L.; Axe, Frank U.; Breitenbucher, J. Guy
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 54 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004214857	A1	20041028	US 2004-825823	20040416
WO 2004093873	A1	20041104	WO 2004-US11775	20040416

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,

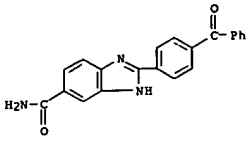
L13 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
PRIORITY APPLN. INFO.: US 2003-463542P P 20030417
OTHER SOURCE(S): MARPAT 141:366232
IT **780776-28-5P**, 2-(4-Benzoylphenyl)-1H-benzoimidazole-5-carboxylic acid
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; preparation of benzimidazole or imidazo[4,5]pyridine derivs., useful as Cds1 inhibitors)
RN 780776-28-5 CAPLUS
CN 1H-Benzimidazole-5-carboxylic acid, 2-(4-benzoylphenyl)- (9CI) (CA INDEX NAME)



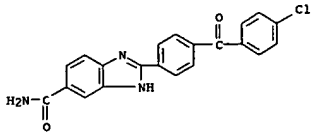
IT **780776-26-3P**, 2-(4-Benzoylphenyl)-1H-benzoimidazole-5-carboxylic acid amide **780776-30-9P**, 2-[4-(4-Chlorobenzoyl)phenyl]-1H-benzoimidazole-5-carboxylic acid amide **780776-38-7P**, 2-[4-(4-Methylbenzoyl)phenyl]-1H-benzoimidazole-5-carboxylic acid amide **780776-39-8P**, 2-[4-(4-Methoxybenzoyl)phenyl]-1H-benzoimidazole-5-carboxylic acid amide **780776-40-1P**, 2-[4-(Naphthalene-2-carbonyl)phenyl]-1H-benzoimidazole-5-carboxylic acid amide **780776-42-3P**, 2-[4-(4-Chloro-3-trifluoromethylbenzoyl)phenyl]-1H-benzoimidazole-5-carboxylic acid amide **780776-44-5P**, 2-[4-(3-Bromo-4,5-dimethoxybenzoyl)phenyl]-1H-benzoimidazole-5-carboxylic acid amide **780776-49-0P**, 2-[4-(3,4-Dichlorobenzoyl)phenyl]-1H-benzoimidazole-5-carboxylic acid amide **780776-53-6P**, 2-[4-(4-Ethylbenzoyl)phenyl]-1H-benzoimidazole-5-carboxylic acid amide **780776-55-8P** **780776-58-1P** **780776-69-4P**, 2-[4-(Hydroxyphenylmethyl)phenyl]-1H-benzoimidazole-5-carboxylic acid amide **780776-71-8P**, 2-[4-[(4-Chlorophenyl)hydroxymethyl]phenyl]-1H-benzoimidazole-5-carboxylic acid amide **780776-77-4P**, 2-[4-(Hydroxynaphthalen-2-ylmethyl)phenyl]-1H-benzoimidazole-5-carboxylic acid amide **780776-85-4P** **780776-88-7P**, 2-[4-[(4-Ethylphenyl)hydroxymethyl]phenyl]-1H-benzoimidazole-5-carboxylic acid amide **780776-92-3P**, 2-[4-[(2,3-Dihydrobenzo[1,4]dioxin-6-yl)-hydroxymethyl]phenyl]-1H-benzoimidazole-5-carboxylic acid amide **780777-55-1P** **780777-60-8P**, 2-[4-(2,4-Dichlorobenzoyl)phenyl]-1H-benzoimidazole-5-carboxylic acid amide **780777-62-0P**, 2-[4-(2-Methoxybenzoyl)phenyl]-1H-benzoimidazole-5-carboxylic acid amide **780777-64-2P**, 2-[4-(2-Methylbenzoyl)phenyl]-1H-benzoimidazole-5-carboxylic acid amide **780777-69-7P**, 2-[4-[(6-Chlorobenzo[1,3]dioxol-5-yl)-hydroxymethyl]phenyl]-1H-benzoimidazole-5-carboxylic acid amide **780777-75-5P** **780777-76-6P**, 2-[4-(Hydroxy-o-tolylmethyl)phenyl]-1H-benzoimidazole-5-carboxylic acid amide

L13 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(prepn. of benzimidazole or imidazo[4,5]pyridine derivs., useful as Cdc1 inhibitors)

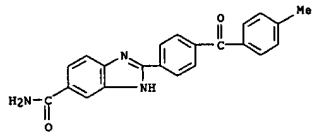
RN 780776-26-3 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-(4-benzoylphenyl)- (9CI) (CA INDEX NAME)



RN 780776-30-9 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[4-(4-chlorobenzoyl)phenyl]- (9CI) (CA INDEX NAME)

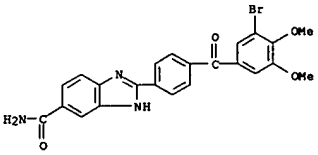


RN 780776-38-7 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[4-(4-methylbenzoyl)phenyl]- (9CI) (CA INDEX NAME)

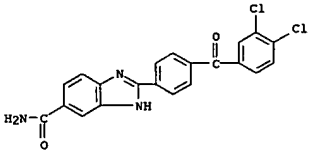


RN 780776-39-8 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[4-(4-methoxybenzoyl)phenyl]- (9CI) (CA INDEX NAME)

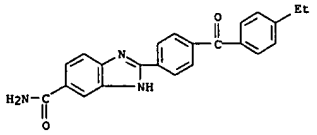
L13 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 780776-49-0 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[4-(3,4-dichlorobenzoyl)phenyl]- (9CI) (CA INDEX NAME)

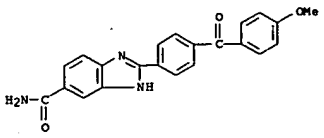


RN 780776-53-6 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[4-(4-ethylbenzoyl)phenyl]- (9CI) (CA INDEX NAME)

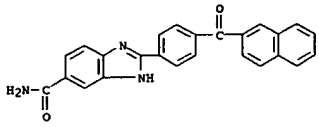


RN 780776-55-8 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[4-(1,3-benzodioxol-5-ylcarbonyl)phenyl]- (9CI) (CA INDEX NAME)

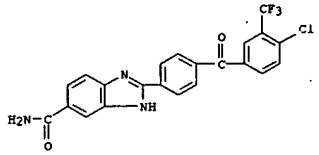
L13 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 780776-40-1 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[4-(2-naphthalenylcarbonyl)phenyl]- (9CI) (CA INDEX NAME)

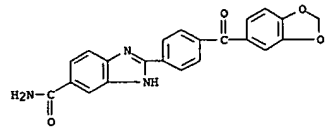


RN 780776-42-3 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[4-[4-chloro-3-(trifluoromethyl)benzoyl]phenyl]- (9CI) (CA INDEX NAME)

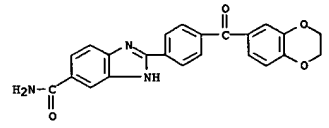


RN 780776-44-5 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[4-(3-bromo-4,5-dimethoxybenzoyl)phenyl]- (9CI) (CA INDEX NAME)

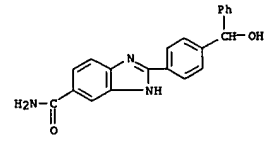
L13 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



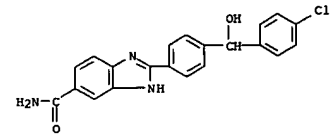
RN 780776-58-1 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[4-[(2,3-dihydro-1,4-benzodioxin-6-yl)carbonyl]phenyl]- (9CI) (CA INDEX NAME)



RN 780776-69-4 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[4-(hydroxyphenylmethyl)phenyl]- (9CI) (CA INDEX NAME)

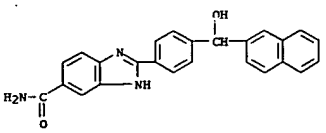


RN 780776-71-8 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[4-[(4-chlorophenyl)hydroxymethyl]phenyl]- (9CI) (CA INDEX NAME)

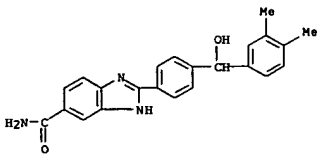


RN 780776-77-4 CAPLUS

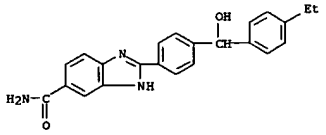
L13 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
CN 1H-Benzimidazole-5-carboxamide, 2-[4-(hydroxy-2-naphthalenylmethyl)phenyl]- (9CI) (CA INDEX NAME)



RN 780776-85-4 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[4-[(3,4-dimethylphenyl)hydroxymethyl]phenyl]- (9CI) (CA INDEX NAME)

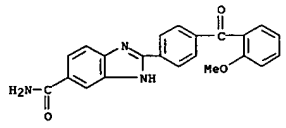


RN 780776-88-7 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[4-[(4-ethylphenyl)hydroxymethyl]phenyl]- (9CI) (CA INDEX NAME)

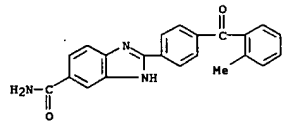


RN 780776-92-3 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[4-[(2,3-dihydro-1,4-benzodioxin-6-yl)hydroxymethyl]phenyl]- (9CI) (CA INDEX NAME)

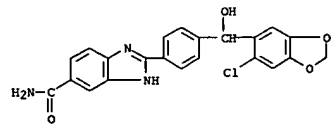
L13 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



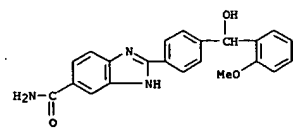
RN 780777-64-2 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[4-(2-methylbenzoyl)phenyl]- (9CI) (CA INDEX NAME)



RN 780777-69-7 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[4-[(6-chloro-1,3-benzodioxol-5-yl)hydroxymethyl]phenyl]- (9CI) (CA INDEX NAME)

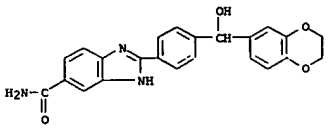


RN 780777-75-5 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[4-[hydroxy(2-methoxyphenyl)methyl]phenyl]- (9CI) (CA INDEX NAME)

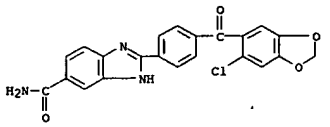


RN 780777-76-6 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[4-[hydroxy(2-

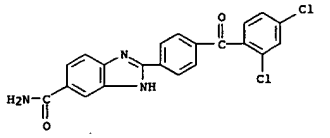
L13 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 780777-55-1 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[4-[(6-chloro-1,3-benzodioxol-5-yl)carbonyl]phenyl]- (9CI) (CA INDEX NAME)

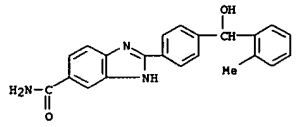


RN 780777-60-8 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[4-(2,4-dichlorobenzoyl)phenyl]- (9CI) (CA INDEX NAME)



RN 780777-62-0 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[4-(2-methoxybenzoyl)phenyl]- (9CI) (CA INDEX NAME)

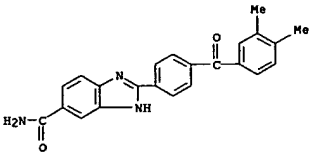
L13 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
methylphenyl)methyl]phenyl]- (9CI) (CA INDEX NAME)



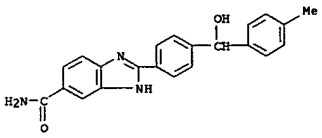
IT **780776-51-4P**, 2-[4-(3,4-Dimethylbenzoyl)phenyl]-1H-benzoimidazole-5-carboxylic acid amide **780776-73-0P**, 2-[4-(Hydroxy-p-tolylmethyl)phenyl]-1H-benzoimidazole-5-carboxylic acid amide **780776-75-2P** **780776-79-6P**, 2-[4-[(4-Chloro-3-trifluoromethylphenyl)hydroxymethyl]phenyl]-1H-benzoimidazole-5-carboxylic acid amide **780776-81-0P**, 2-[4-[(3-Bromo-4,5-dimethoxyphenyl)hydroxymethyl]phenyl]-1H-benzoimidazole-5-carboxylic acid amide **780776-83-2P** **780777-00-6P**, 2-[4-(Methoxyphenylmethyl)phenyl]-1H-benzoimidazole-5-carboxylic acid amide **780777-02-8P**, 2-[4-(4-Chlorobenzyl)phenyl]-1H-benzoimidazole-5-carboxylic acid amide **780777-04-0P**, 2-[4-(Naphthalen-2-ylmethyl)phenyl]-1H-benzoimidazole-5-carboxylic acid amide **780777-06-2P**, 2-[4-(3,4-Dimethylbenzyl)phenyl]-1H-benzoimidazole-5-carboxylic acid amide **780777-08-4P**, 2-[4-(4-Ethylbenzyl)phenyl]-1H-benzoimidazole-5-carboxylic acid amide **780777-10-8P**, 2-[4-(2,3-Dihydrobenzo[1,4]dioxin-6-ylmethyl)phenyl]-1H-benzoimidazole-5-carboxylic acid amide **780777-14-2P**, 2-[4-[1-(4-Chlorophenyl)vinyl]phenyl]-1H-benzoimidazole-5-carboxylic acid amide **780777-18-6P**, 2-[4-[1-(4-Chlorophenyl)ethyl]phenyl]-1H-benzoimidazole-5-carboxylic acid amide **780777-19-7P**, 2-[4-[(4-Chlorophenyl)piperazin-1-ylmethyl]phenyl]-1H-benzoimidazole-5-carboxylic acid amide **780777-20-0P** **780777-58-4P**, 2-[4-(2-Chlorobenzoyl)phenyl]-1H-benzoimidazole-5-carboxylic acid amide **780777-71-1P**, 2-[4-[(2-Chlorophenyl)hydroxymethyl]phenyl]-1H-benzoimidazole-5-carboxylic acid amide **780777-73-3P** **780777-78-8P**, 2-[4-(6-Chlorobenzo[1,3]dioxol-5-ylmethyl)phenyl]-1H-benzoimidazole-5-carboxylic acid amide **780777-80-2P**, 2-[4-(2-Methoxybenzyl)phenyl]-1H-benzoimidazole-5-carboxylic acid amide **780777-82-4P**, 2-[4-(2-Methylbenzyl)phenyl]-1H-benzoimidazole-5-carboxylic acid amide **780778-69-0P**, 2-[4-[(2-Aminoethoxy)-(4-chlorophenyl)methyl]phenyl]-1H-benzoimidazole-5-carboxylic acid amide **780778-71-4P**, 2-[4-[(4-Chlorophenyl)difluoromethyl]phenyl]-1H-benzoimidazole-5-carboxylic acid amide **780778-73-6P** **780778-75-8P**, 2-[4-[1-(4-Chlorophenyl)-1-methylethyl]phenyl]-1H-benzoimidazole-5-carboxylic acid amide **780778-77-0P**, 2-[4-[(4-Chlorophenyl)cyanomethyl]phenyl]-1H-benzoimidazole-5-carboxylic acid amide
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of benzimidazole or imidazo[4,5]pyridine derivs., useful as Cdsl inhibitors)

RN 780776-51-4 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[4-(3,4-dimethylbenzoyl)phenyl]- (9CI) (CA INDEX NAME)

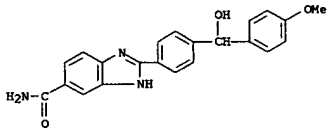
L13 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 780776-73-0 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[4-[hydroxy(4-methylphenyl)methyl]phenyl]- (9CI) (CA INDEX NAME)

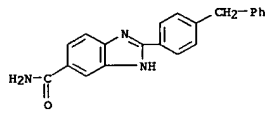


RN 780776-75-2 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[4-[hydroxy(4-methoxyphenyl)methyl]phenyl]- (9CI) (CA INDEX NAME)

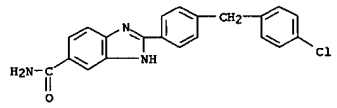


RN 780776-79-6 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[4-[[4-chloro-3-(trifluoromethyl)phenyl]hydroxymethyl]phenyl]- (9CI) (CA INDEX NAME)

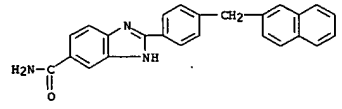
L13 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



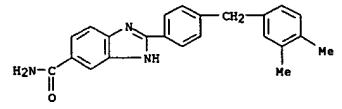
RN 780777-02-8 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[4-[(4-chlorophenyl)methyl]phenyl]- (9CI) (CA INDEX NAME)



RN 780777-04-0 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[4-(2-naphthalenylmethyl)phenyl]- (9CI) (CA INDEX NAME)

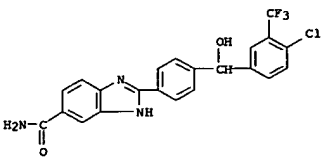


RN 780777-06-2 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[4-[(3,4-dimethylphenyl)methyl]phenyl]- (9CI) (CA INDEX NAME)

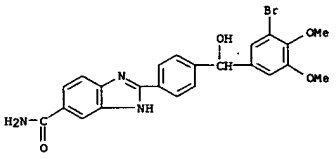


RN 780777-08-4 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[4-[(4-ethylphenyl)methyl]phenyl]- (9CI) (CA INDEX NAME)

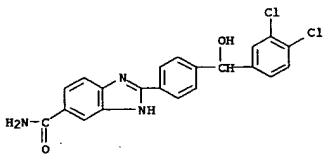
L13 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 780776-81-0 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[4-[(3-bromo-4,5-dimethoxyphenyl)hydroxymethyl]phenyl]- (9CI) (CA INDEX NAME)

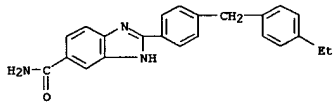


RN 780776-83-2 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[4-[(3,4-dichlorophenyl)hydroxymethyl]phenyl]- (9CI) (CA INDEX NAME)

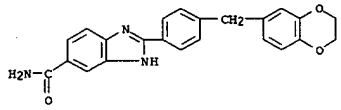


RN 780777-00-6 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[4-(phenylmethyl)phenyl]- (9CI) (CA INDEX NAME)

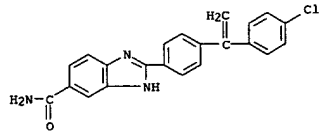
L13 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



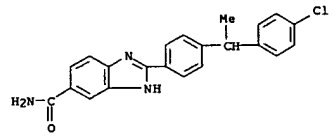
RN 780777-10-8 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[4-[(2,3-dihydro-1,4-benzodioxin-6-yl)methyl]phenyl]- (9CI) (CA INDEX NAME)



RN 780777-14-2 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[4-[1-(4-chlorophenyl)ethenyl]phenyl]- (9CI) (CA INDEX NAME)

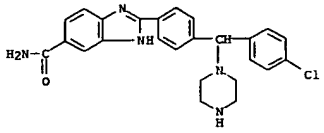


RN 780777-18-6 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[4-[1-(4-chlorophenyl)ethyl]phenyl]- (9CI) (CA INDEX NAME)

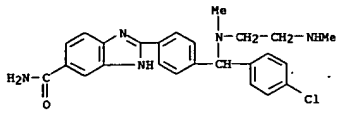


RN 780777-19-7 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[4-[(4-chlorophenyl)-1-piperazinylmethyl]phenyl]- (9CI) (CA INDEX NAME)

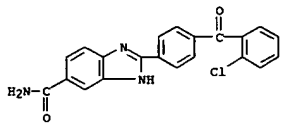
L13 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



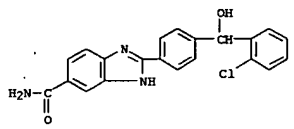
RN 780777-20-0 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[4-[(4-chlorophenyl)[methyl[2-(methylamino)ethyl]amino]methyl]phenyl]- (9CI) (CA INDEX NAME)



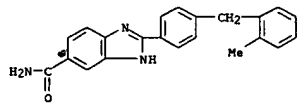
RN 780777-58-4 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[4-(2-chlorobenzoyl)phenyl]- (9CI) (CA INDEX NAME)



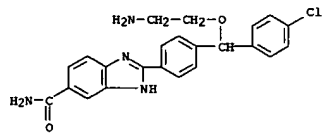
RN 780777-71-1 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[4-[(2-chlorophenyl)hydroxymethyl]phenyl]- (9CI) (CA INDEX NAME)



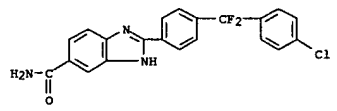
L13 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



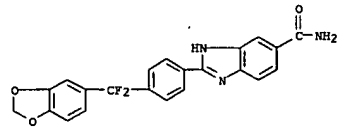
RN 780778-69-0 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[4-[(2-aminoethoxy)(4-chlorophenyl)methyl]phenyl]- (9CI) (CA INDEX NAME)



RN 780778-71-4 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[4-[(4-chlorophenyl)difluoromethyl]phenyl]- (9CI) (CA INDEX NAME)



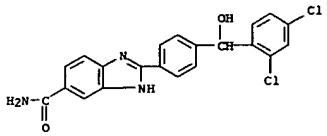
RN 780778-73-6 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[4-(1,3-benzodioxol-5-yldifluoromethyl)phenyl]- (9CI) (CA INDEX NAME)



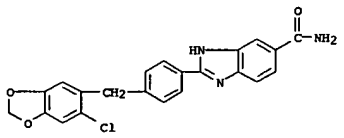
RN 780778-75-8 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[4-[1-(4-chlorophenyl)-1-methylethyl]phenyl]- (9CI) (CA INDEX NAME)

L13 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

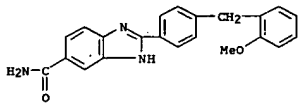
RN 780777-73-3 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[4-[(2,4-dichlorophenyl)hydroxymethyl]phenyl]- (9CI) (CA INDEX NAME)



RN 780777-78-8 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[4-[(6-chloro-1,3-benzodioxol-5-yl)methyl]phenyl]- (9CI) (CA INDEX NAME)

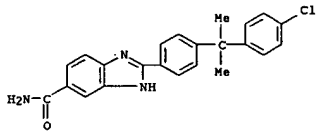


RN 780777-80-2 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[4-[(2-methoxyphenyl)methyl]phenyl]- (9CI) (CA INDEX NAME)

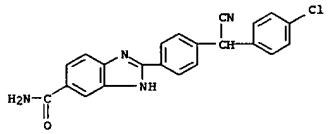


RN 780777-82-4 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[4-[(2-methylphenyl)methyl]phenyl]- (9CI) (CA INDEX NAME)

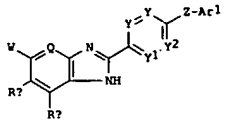
L13 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 780778-77-0 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[4-[(4-chlorophenyl)cyanomethyl]phenyl]- (9CI) (CA INDEX NAME)



L13 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN
ED Entered STN: 25 Apr 2003
GI



I

AB 2-Aryl-substituted benzimidazoles and imidazo[4,5]pyridines (shown as I; e.g. 2-[4-(4-chlorophenoxy)phenyl]-1H-benzimidazole-5-carboxylic acid amide (II)) are disclosed as inhibitors of Cds1 and useful as adjuvants to chemotherapy or radiation therapy in the treatment of cancer. For I: W is COOH, -C(O)NHR1, or -SO2NHR1 (R1 is H or C1-4alkyl); Q is N or CH; Ra and Rb are H or halogen; Y, Y1 and Y2 = N and C-Rc with the proviso that 0, 1 or 2 of Y, Y1 and Y2 are N and at least 2 of Rc must be H; Rc = -H, -OH, -C1-6alkyl, -SCF3, halo, -CF3 and -OCF3; Z = O, S, SO, SO2, SO2NR2, NR2SO2, NH, CONR2, piperazinediyl or a covalent bond; R2 is H or C1-4alkyl; Ar1 is an aromatic group as defined in the claims. IC50 values are reported for inhibition of human Cds1 checkpoint kinase by 103 examples of I, e.g. 3 nM for 2-[4-(4-chloro-3-trifluoromethylphenoxy)phenyl]-1H-benzimidazole-5-carboxylic acid amide. Addnl. studies were (i) determination of the effect of II on tumor cell line clonogenic survival, (ii) effect of II on tumor growth in murine xenograft models, (iii) determination of the effect of 14 examples of I on radiation-induced apoptosis in isolated primary cells, and (iv) determination of the effect of II on radiation-induced apoptosis in splenocytes in vivo. Although the methods of preparation are not claimed, .apprx.100 example prepns. are included.

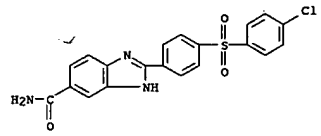
ACCESSION NUMBER: 2003:319709 CAPLUS
DOCUMENT NUMBER: 138:338144
TITLE: Preparation of 2-phenyl benzimidazoles and imidazo-[4,5]pyridines as Cds1/Chk2-inhibitors and adjuvants to chemotherapy or radiation therapy in the treatment of cancer
INVENTOR(S): Arienti, Kristen L.; Axe, Frank U.; Breitenbucher, J. Guy; Huang, Liming; Lee, Alice; McClure, Kelly J.
PATENT ASSIGNEE(S): Ortho-McNeil Pharmaceutical, Inc., USA
SOURCE: PCT Int. Appl., 144 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003032984	A1	20030424	WO 2002-US33371	20021018
WO 2003032984	C1	20031120		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,

Did not design US.

L13 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

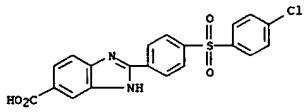
PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

CA 2464000	AA	20030424	CA 2002-2464000	20021018
US 2003176438	A1	20030918	US 2002-273487	20021018
EP 1435947	A1	20040714	EP 2002-770620	20021018
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
BR 2002006161	A	20050201	BR 2002-6161	20021018
JP 2005506349	T2	20050303	JP 2003-535787	20021018
NO 2003002759	A	20030818	NO 2003-2759	20030617
ZA 2003005533	A	20041018	ZA 2003-5533	20030717

PRIORITY APPLN. INFO.: US 2001-330304P P 20011019
WO 2002-US33371 W 20021018

OTHER SOURCE(S): MARPAT 138:338144

IT 516481-61-1P, 2-[4-(4-Chlorobenzenesulfonyl)phenyl]-1H-benzimidazole-5-carboxylic acid
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(drug candidate; preparation of benzimidazoles and imidazopyridines as Cds1/Chk2-inhibitors and adjuvants to chemotherapy or radiation therapy in treatment of cancer)
RN 516481-61-1 CAPLUS
CN 1H-Benzimidazole-5-carboxylic acid, 2-[4-[(4-chlorophenyl)sulfonyl]phenyl]- (9CI) (CA INDEX NAME)



IT 516481-60-0P, 2-[4-(4-Chlorobenzenesulfonyl)phenyl]-1H-benzimidazole-5-carboxylic acid amide
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(drug candidate; preparation of benzimidazoles and imidazopyridines as Cds1/Chk2-inhibitors and adjuvants to chemotherapy or radiation therapy in treatment of cancer)
RN 516481-60-0 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[4-[(4-chlorophenyl)sulfonyl]phenyl]- (9CI) (CA INDEX NAME)

=> log h

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	15.27	796.07

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-2.19	-43.80

SESSION WILL BE HELD FOR 60 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 13:26:33 ON 13 OCT 2005